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### Calculating the College-to-University Transfer Rate in Ontario

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#### Introduction

Ontario Colleges of Applied Arts and Technology were established in part to educate the Grade 12 graduate not destined for university, in an educational sector meant to be “equal” to but separate from the Universities. There were no systematic arrangements for transfer between sectors, but it was left open for future negotiations should the circumstances warrant revisiting the issue. Educating and training for the workplace was established as the mission. The Ontario CAATs were deliberately named to distinguish themselves from American Community Colleges where “the transfer mission is perhaps the most traditional role of community colleges” (Doucette and Hughes, 1990. p 7) and their performance of this function is a critical issue. Evidence of decreasing transfer rates have resulted in increased criticism and skepticism about this role, leading to a re-assessment of their dominant function.

In Canada, British Columbia has a post-secondary system which most closely resembles the intent of the United States. A 1987 report, *Access to Advanced Education and Job Training in British Columbia*, reported that British Columbia ranked ninth in the ratio of students obtaining degrees and seventh in the number of those in the 18 to 24 year old range. The recommendations included measures that would increase access to degrees by facilitating university transfer through existing community colleges and establishing University-Colleges (Dennison, 1995). The British Columbia Council on Admissions and Transfer (BCCAT) was created to assist in co-ordination and transfer between the two sectors and as importantly, undertake or sponsor studies and the collection of data.

The original mandate and the focus of Ontario CAATs has been on the employment of its graduates, but the number of articulation agreements and attempts to establish agreements with universities clearly indicates the increasing importance of transfer. Even though transfer has not been the traditional function of CAATs, the Transfer Guide “adds legitimacy to transfer as a college function and acknowledges it as a core college activity” (Smith, 1998. p24). Because measuring the movement of students to other post-secondary institutions has not been a priority, there is no provincial body in place to document this activity. This absence has created a frustrating situation for gathering information.

Had there been a system-wide data base and a good periodic tracking system some of the data gathering

burden of this thesis would have been unnecessary. Ideally the monitoring of transfer students would be part of an overall management information system to serve those responsible for making decision that affect the total tertiary level of education in the province. In an era demanding greater accountability, such a management information system is long overdue. (Smith, 1998. p25)

The College University Consortium Council (CUCC) was established to facilitate agreements between the college and university sectors. The Ontario Colleges of Applied Arts and Technology had been requesting some government action to hasten a sluggish and frustrating process towards more articulation. The Council of Ontario Universities (COU) had lobbied the government as well, but was advocating a voluntary process because the current state was resulting in greater co-operation. The CUCC's two most significant contributions have been the on-line Ontario College University Transfer Guide (OCUTG) to provide students with up-to-date, accurate information about transfer, and the Port Hope Accord to set a template for amount of transfer in future articulation agreements. The CUCC itself has attempted to conduct a study of general transfer, only to be frustrated by a decentralized data base with incomplete information.

Several attempts have been made to quantify the movement of students between colleges and universities (Stokes, 1989; Pitman, 1993; Cummins, 1998). Data from the 1980s shows an increasing number of applicants having an interest in movement from college to university and university to college (Pitman, 1993), and a steady number of students with a CAAT background registered at Ontario universities (Cummins, 1998). Stokes (1989) reported that 3.3% of university registrants in 1986 entered after having spent some time at a community college. Half of those students were graduates from a college program and proceeded directly to university. In Stokes's analysis the proportion of college graduates attending university has remained "relatively steady over the five year period from 1982-83 to 1986-87, ranging from 2.3% to 2.7%" (Stokes 1989, p.8). Walter Pitman in "No Dead Ends" (1993) reported an increase from 1339 new CAAT registrants in all universities in 1985 to 1527 in 1990. The difficulty in comparing with Stokes's work is that Pitman's report shows only the raw numbers and makes no comparison to the overall number of university applicants or college graduates. In the author's view, students are "voting with their feet", pursuing an education that combines the best of both college and university in spite of inadequate structures to facilitate movement between the two sectors.

Rodger Cummins (1998) was commissioned by the CUCC in an effort to provide "hard evidence" for the number of students transferring between sectors and to collect information regarding their characteristics and aspirations. Cummins was to examine existing sources of evidence to obtain data on the movement of students & graduates and their success in programs, the most important

characteristics of students, and the aspirations of college students and graduates to move to universities. The report gathered data from a number of different sources including the Ontario College Application Services (OCAS) and the Ontario Universities' Application Service (UAS). None of the data bases in these sources was designed to answer the specific questions sought by the CUCC and proved unsatisfactory for their purposes. The existing sources proved unsatisfactory because in some cases they were not designed to provide statistics needed, the populations were not inclusive, were dependent on responses uncritically entered into databases and, were not current. Much of the information tabled in the document, therefore, "understates the movement" of students between sectors. Nonetheless, 7.8% of the total number of applicants to university in 1996 had CAAT backgrounds. In identifying the program of origin, the report showed that 35% of 1996 University applicants came from a "Social Services" CAAT program, 21% came from "Office & Business Administration" and 16% came from "Technology". In the final version, Rodger Cummins concluded that "sound evidence that is reliable, complete and current does not appear to exist. Available sources compose a pastiche which is interesting but not conclusive." (Rodger Cummins, 1998 (emphasis in original)).

Measuring transfer is as varied as it is controversial, particularly in an era of increased accountability and in the case of Ontario Colleges, in a time of flux and change. American Community Colleges have been grappling with the definition of a transfer rate, continuing to fail on reaching a consensus.

Although it is generally agreed that the transfer rate is the ratio of students who transfer (numerator) to the potential number of transfer students (denominator ) there is little agreement on what constitutes a potential transfer student, the denominator of all models. Suggestions as to the denominator have ranged from a college's total headcount, to those students completing at least a minimum number of units, to those students certified as transfer ready (that is, completing college- or university-specified lower-division general education requirements for the baccalaureate). (Spicer and Armstrong, 1996)

The result, therefore, has been extreme reports of transfer rates from 5% when you divide by the total college enrolment to 84% when you divide by the students who aspired to transfer upon entry and successfully completed the minimum number of transfer courses (Gelin, 1999). The importance of an acceptable transfer calculation has political implications in Ontario as the college and university sectors adapt to changing legislation and mandates. Recent studies, including Cummins report that 7.8% of 1996 university applicants had CAAT backgrounds, have indicated relatively low transfer rates in Ontario. This kind of information when compared to British Columbia's 10 - 12% range and coupled with declining rates in the United States, have been used to bolster the arguments of opposing camps on the

issue of transfer (Skolnik 1995):

The fact that the flow of students from the CAATs to the universities has been so small has been taken as evidence of a serious problem by those who want to see transfer arrangements greatly improved, whereas their opponents have used the same figure to show that there is not a problem; that is, they take the figure as indicating a lack of demand. (p.443)

Despite the Vision 2000 report which identified the barriers for college students to access the university, response from both college and university representatives was “muted” (Skolnik 1995). Universities felt progress was being made in transferability and colleges did not list the issue as a high priority.

Gellin (1999) noted that the literature stemming from experience in the United States identifies five issues that need to be considered when identifying the best definition for calculating transfer rate: entering or exiting student cohort; time frame for transfer; minimum number of college credits completed; type of curriculum studied and student intent to transfer. After identifying the pros and cons of some recent approaches in the United States, Gellin suggested three transfer rate models for B.C. institutions: Entering Student Cohort model; Exiting Student Cohort model; and Transfer Readiness model. In each he describes what defines the denominator and the numerator, considering the issues listed. Each has its merits and can be modified to include institution specific factors such as aspirations or intent to transfer. These cannot be applied automatically to the situation in Ontario because each relies on “a minimum of 12 college-level credits that have transfer credit to at least one B.C. public four year degree granting institution”. There does not exist a system of college-level credits that have direct transfer credit to a university. Such courses exist at individual colleges that have negotiated with a local university (Note 2). Their applicability to other universities is uncertain. Under normal circumstances, students are able to apply for transfer after completing a minimum number of “academic” courses at college and may be eligible for some transfer credit. Outside of a transfer or articulation agreement, therefore, the receiving institution assesses the applicant’s program for academic content to determine the number of semesters required to fulfill the entrance requirements, and perhaps obtain some transfer credit. What may be sufficient for one university, may not be for another. College students enrol in programs and generally are not free to choose their credits but must complete the prescribed subjects.

This paper is an attempt to continue the transfer analysis by revisiting some of the issues raised in this discussion. The information needed for such an analysis is collected at different levels and is reflected in the reporting. The paper will assess the level of aspiration of community college students to transfer to a university program by analyzing data from Seneca College. Another attempt will be made to

document the number of students who do transfer province wide and at Seneca College. These two components were determined by compiling existing data collected by the college and the province of Ontario. Then, the paper will analyze the intent and actual transfer of the General Arts and Science program at Seneca. In this last part, the analysis is derived from existing data collections and from a telephone survey conducted in Spring 2001. The paper will attempt to apply Gellin's Entering and Exiting Student Cohort Model to the General Arts and Science program. Finally, the paper will conclude with some comments on the data, the models and the program, indicating areas of strength, weakness and further study.

### Intent to Transfer

Increasingly, the completion of a degree has become the benchmark to assess job qualifications for positions. Professions such as Accounting and Nursing have been raising the bar for qualifications by a degree completion requirement to receive certification where a College diploma in the appropriate program used to be sufficient. This credentialism has not escaped the general public and students endeavoring to enrol in post-secondary education. Applications and acceptances for universities continue to rise as the number of professions needing a degree accumulates. Naturally, the college student also seeks to obtain that degree, and the amount and ease of transfer becomes increasingly important. If there are an increasing number of college students transferring to university, then it stands to reason there is growing aspiration among college students to attain a degree. Smith (1998) and Craddock (1999) in their studies on transfer, ascertained timing and reasons for transfer. The information is valuable to show how aspirations change and to identify reasons for the alteration; but in both cases, the questions were answered in hindsight. There would be equal merit in determining the number who enter colleges intending to transfer to university upon completion.

When students are accepted to a full-time certificate or diploma program at Seneca College, they are required to complete placement tests for English and mathematics. Along with these tests, they are also asked to complete a survey that attempts to document some background data. The answers provide valuable information about the last English and mathematics courses completed, the first language spoken at home, the reasons for choosing program and for the purposes of this paper, the intentions of students upon graduation. These questions have been asked for a number of years. A comparison of the changes in response to aspirations after graduation is shown in Table One.

**Table One**

<b>Comparing Entrance Aspirations, Seneca College 1992-2002</b>		
<b>After graduation, I hope to ...</b>	<b>Fall 1992</b>	<b>Fall 2002</b>
enter another program at Seneca	10.8%	5.3%
enter another program at another college	1.3%	1.7%

enter university	20.1%	38.7%
enter a full time job	58.2%	47.2%
enter a part time job	0.7%	0.5%
start my own business	6.2%	3.9%
other	2.6%	2.7%
Total number of students	5269	5364

The trend illustrates a growing number of entering college students whose goal is to pursue university education after graduation (Note 3). The numbers also vary according to program varying from a low of 2.9% to a high of 76.6%. Seventeen different programs in Fall 2002 showed more than half of first-time students planning to pursue university education after graduation. The programs represented in that number include Business Administration, Early Childhood Education, Computer Electronics, BTR, Court & Tribunal Agent, and General Arts & Science which had the highest. The dispersion of the students among divergent programs illustrates the widespread desire to augment their vocational education with another, perhaps more recognizable credential.

The numbers indicate a significant minority of students whose aspirations are to attend university. "The problem is not of student interest. Rather it is one of unequal and limited opportunity, with structural impediments to the transfer of students between the sector." (Pitman, 1993. p.139) As noted, these numbers are derived from an entrance survey attempting to capture the aspirations and motivations of students as they enrol into the college. The Nipissing study (Craddock, 1999) showed a significant percentage who decided to transfer during their tenure at the college. On this basis, a number of students will have decided to attempt to attend after spending some time at college, thereby increasing the number of overall university aspirants.

Transfer, although not the original intention of the Ontario college system, has become part of its mandate, if only to assist students in achieving their goals. Seneca's response to this growing trend has been to continually pursue additional transfer agreements with universities and to establish a University Transfer office. This office catalogs the arrangements, conveys the information to aspiring students, and facilitates transfer where possible. Seneca has not been successful in tracking these students, or others who subsequently decided to apply while in college, to determine if they managed to enrol at a university. Without this analysis, the institution will not be able to assess the degree to which it is helping to fulfill this new function.

### **Actual Transfer**

Because of its size and scope, the Graduate Student Survey (GSS) provides a unique opportunity to assess the amount of movement from college to university, at least for those who have

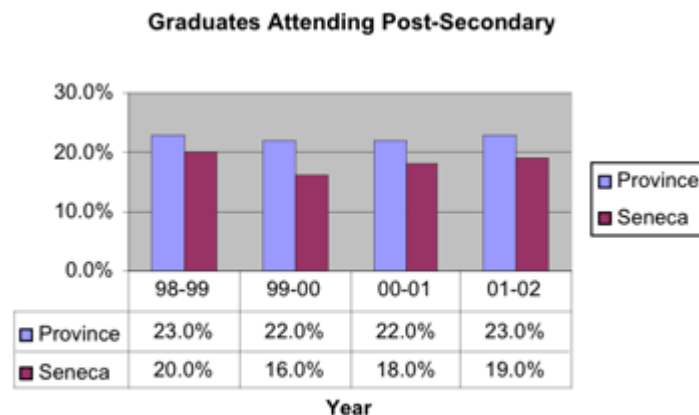
graduated from a College of Applied Arts and Technology (CAAT) program. Mandated by the Ministry of Training, Colleges and Universities to calculate three of the five Key Performance Indicators (KPI), the GSS is a survey of all students who have graduated from a College of Applied Arts and Technology conducted six months after completion. Because students graduate three times a year (Winter, Summer, Fall), the GSS is administered three times by an external consulting firm hired by the MTCU. Each CAAT provides the names and contact information for their respective graduates and the consulting firm conducts a telephone survey with the mandate to contact a minimum of 70% of the graduates for each of the programs. The intention of the survey is three fold: the first is to determine if the graduate is employed (to calculate a second KPI, Graduate Employment); the second is to obtain permission to contact the graduate's employer for another survey (to measure a third KPI, Employer Satisfaction); and, the third is to answer questions about the graduates' education in relation to their current status, specifically if they are satisfied that their education prepared them for the workplace (to calculate the third KPI, Graduate Satisfaction). The analysis for this paper begins with those who graduated in Summer 1998 and continues with those who graduated in Winter 2001. Because the GSS is conducted six months after graduation, the surveys would have begun in March 1999 and continued in July and November each year until November 2002. The consulting firm provides a report showing the college compared to the rest of the province and a file of the college's raw data. There is an annual Comparative Report that consolidates the results for the three surveys conducted each calendar year. For this paper, there are four comparative reports, from here on referred to as 98-99, 99-00, 00-01 and 00-01, with the results of the graduate survey for the three graduating classes in Summer, Fall and Winter.

Respondents are asked at the outset of the questionnaire if they are attending an educational institution on a full or part-time basis. The results show 22 to 23% of all provincial respondents are continuing their education at some post-secondary institution. The percentage of Seneca graduates is smaller, albeit increasing each year, from a low of 16% for the 99-00 graduates to 19% for the 01-02 graduates. The response includes those attending a college, a university, or another post-secondary institution. The percentage of these attendees enrolled at a university on a part or full time basis is illustrated in Figure Two. The results indicate clearly that an increasing number of graduates are attending a university immediately after graduation. At the provincial level, the proportion of these graduates enrolling at a university has grown steadily since 98-99 to account for more than one-quarter (26.2%) of post-secondary attendees. This change is occurring even though the provincial percentage of post-secondary attendees has not changed, as shown in Figure One.

At Seneca, more than half (51.4%) of the post-secondary attendees in the 01-02 survey were enrolled at a university. Like the

provincial statistics, an increasing proportion are opting for university instead of college at almost three times the rate of the province (15.1% to 5.5%). While the percentage of post-secondary attendees increased by 3% since 99-00, the percentage of university transfer increased 10%. More than three-quarters of these university transfer students are attending a university on a full-time basis.

Figure One



Overall, 79.5% of the graduates enrolled at a university on a full-time basis. This percentage has been increasing since the 99-00 survey so that in the 01-02 survey, 82.4% were enrolled full-time. Clearly, university has become the destination of choice for Seneca graduates wanting to pursue further education as a full-time student.

Because the focus of the survey is college graduates and does not survey qualified early leavers, the results of the Graduate Survey provide a conservative estimate of the amount of transfer from College to University. As well, the Graduate Survey is completed 6 months after graduation and therefore precludes those who may have delayed re-entry into a post-secondary institution for financial or other reasons (Note 4). Nevertheless, we are given a glimpse of the movement and an opportunity to continue tracking the yearly results. The survey also enables a rough calculation of a Transfer rate as measured by the Gellin's Exiting Model (Note 5). As defined, the denominator for the Exiting Model is the number of students who had completed at least 12 university transferable credits. Even though the system of university transferable credits is not applicable directly to Ontario, students completing a CAAT diploma will have completed, at least, the minimum requirement for university admission and may even be granted some transfer credit. The Graduate Survey will have included also students completing Certificate programs, some of which, because of their content would not be eligible for minimum admission. The assumption in this analysis is that the number of those graduates in the survey are very small and would have no appreciable impact on the overall numbers. Figure Three, therefore, attempts to measure the number of transfer students as a proportion of the total



number of graduates.

The result is not the best reflection of the interest and activity among CAAT students because the Graduate Student survey only measures those who have graduated; the students are not enrolled in transfer “programs”; and, a large number of students did not enrol with the intention to transfer.

Figure Two

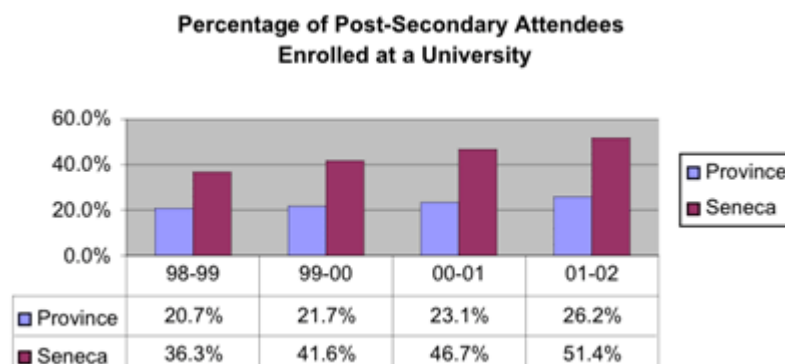
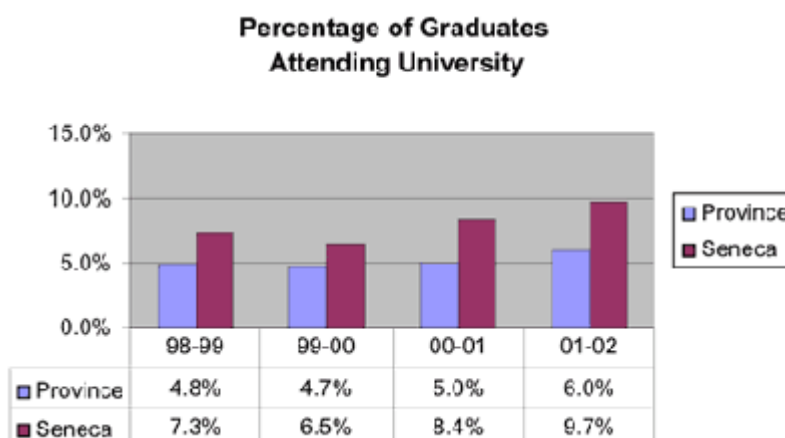


Figure Three



Nevertheless, this version of the transfer rate, as illustrated in Figure Three, shows a steady increase in the percentage of graduates attending a university immediately after graduation. Provincially, the overall percentage increases from a low of 4.7% in 99-00 to 6.0% in the most recent survey. The rate of increase at Seneca is double that of the province, improving from 6.5% of graduates in the 99-00 survey to 9.7% in the 01-02 survey. By this measure, the percentage is small and does not compare to the statistics outlined in other jurisdictions, perhaps justifying the lack of provincial interest in the further expansion of effort in this area. Unlike American Community Colleges, Ontario CAATs were not established to facilitate transfer. The relatively low percentage, therefore, should not be considered as evidence for poor effectiveness.

Inconsistent measurement and reporting of student movement from college to university makes meaningful comparison to other studies impossible. The results from the Graduate Student Survey are only for those who have graduated. The survey does not document those who may have transferred to a university before completion of their college credential and as such, the results cannot be compared to earlier studies. The percentage increase reported in Figure Three appears small and perhaps insignificant. The amount of movement from college-to-university, however, is better illustrated when discussed in raw numbers. There were 2,232 Ontario college graduates attending university six months after graduating in the 01-02 survey. The result reflects a 27% increase from the 1,764 university attendees in the 00-01 survey and a 40% increase from the 1,594 university attendees in the 99-00 survey. In these terms, the increase is dramatic and noteworthy, warranting an in-depth analysis of these graduates who are pursuing further education at university.

### **General Arts and Science Program**

Even though we have shown an increasing number of students intending to transfer, the percentage is unequally distributed among the programs. A more precise measure would be to analyze those programs for which a large percentage of students want to transfer and those programs which have active, negotiated transfer agreements in place. Gellin suggests that modification of the Exiting Model could account for students whose intention was to transfer were that data available. That information is not available at the provincial level. The information is collected at Seneca, but there has been no attempt to correlate the results of the Graduate Survey with the answers to the incoming Background Data survey. The beginning of such an analysis could be at the program level.

The General Arts and Science Program (GAS) more closely resembles 2 year colleges in the United States in that the intent of many who enrol is to transfer and that the majority of students are unable to enter university on the basis of previous credentials. Recall that the General Arts and Science program shows the highest rate (76.6%) of those students who intend to transfer after graduation. As the overall Seneca numbers steadily increase, so does the desire of students enrolling in the General Arts and Science program ensuring that it consistently ranks at the top.

General Arts and Science students distinguish themselves from other programs both by the numbers who want to transfer and for the reasons for program choice. When asked to respond to the statement, "I mainly chose my College program because..", 50.9% of the GAS students entering in Fall 2002 cited "keeping my options open" compared to 6.8% for all other Seneca students. Similarly, only 38.3% of GAS students chose the program because it "suits my career interests" compared to 89.5% for all other Seneca students.

General Arts and Science students wanting to keep their options

open is largely a function of the program. Unlike other college programs which have a very specific career objective, GAS has a mandate to be a stepping stone for students to further their education. Recent transfer agreements with universities, particularly a joint program with York University's Faculty of Arts, has increased the number of students whose desire is to enter university. The General Arts and Science program allows the opportunity to test the transfer rates more accurately by individually identifying and surveying all participants in the program. In this manner, graduates and non-graduates are questioned about their educational accomplishments and aspirations.

In Spring 2001, a survey was conducted of all students who were enrolled in the General Arts and Science program from the 1996 Fall semester to the 1999 Fall Semester. Fall 1996 was selected as the starting point because it predates an articulation with York University. Spring 2001 would have been the first chance for students to graduate from the Fall 1999 intake. The GAS program has two intakes per academic year, one beginning in September, the other beginning in January. The target enrolment of students is higher for the Fall and has been climbing since the transfer agreement was signed with York University. The Winter intake on the other hand is lower and the numbers have remained relatively stable (Note 6). Using the internal computer record system, the transcript of every student who had been registered in the GAS program was retrieved. Each student was then categorized into having been academically successful or not. Academically successful was defined as someone who has been permitted to continue in the GAS program or another program in the college. Academically unsuccessful was defined as a student who because of their poor performance was asked to withdraw from General Arts and Science or any other program to which the student had transferred. The academically unsuccessful, therefore, are those students who are no longer in the college for academic reasons.

If a student was identified as academically successful, then there was an attempt to determine what had become of the student. On this basis there were three possibilities: transferred to another college program, no longer enrolled in the college, or still in the program. A phone survey was then conducted on those who were academically successful but were no longer enrolled in the college. The purpose was to determine who had continued their education, but primarily to determine who had enrolled at a university having left the General Arts and Science program. Those students who were no longer in the college because of poor academic performance were not surveyed based on the assumption that their record would prevent them from pursuing a degree. It is conceivable that some of those students may have enrolled in another college, but since the purpose of this paper was to assess university transfer, this information was not ascertained. The students were identified by the year in which they began the program to determine if there was a changing pattern. Finally, for each student whose record had been identified and who

was contacted for the survey, the response to the statement about future aspirations was recorded. With this information about destination and aspirations, we can then calculate the transfer rate as a percentage of all students in the program and as a percentage of all students who aspired to attend university.

Table Two shows the results of an analysis of every student who was enrolled in the General Arts and Science program. It shows the distribution of the students from each entry period, according to several categories. "Not Reached" are those students for whom there is no longer current contact information and those who did not return phone calls. The title of the remaining rows are self-explanatory, indicating the number still in the program, withdrawn for academic reasons, working, enrolled in another college program, or enrolled at a university. The percentage is calculated using the total number of students registered in semester one.

**Table Two**

Distribution of GAS Students by Each Intake.								
Fall 1996 to Fall 1999								
	Fall 1996	Winter 1997	Fall 1997	Winter 1997	Fall 1998	Winter 1997	Fall 1999	Total
Registered Semester One	147	87	150	106	186	103	240	1019
Not Reached and not included	43 29.3%	22 25.3%	33 22.0%	26 24.5%	65 34.9%	28 27.2%	66 27.5%	283 27.8%
Withdrawn for Academic Reasons	74 50.3%	48 55.2%	72 48.0%	50 47.2%	52 28.0%	42 40.8%	78 32.5%	416 40.8%
Still in Program	1 1.4%	1 1.1%	2 1.3%	2 1.9%	7 3.8%	6 5.8%	22 10.0%	43 4.2%
Working	2 1.4%	2 2.3%	1 0.7%	0 0.0%	1 0.5%	1 1.0%	3 1.2%	10 1.0%
Enrolled in another College Program	22 15.0%	11 7.3%	31 20.7%	22 20.8%	44 29.3%	15 23.7%	40 16.7%	185 18.2%
Enrolled in University	5 3.4%	3 3.4%	11 7.3%	6 5.7%	17 9.1%	11 10.7%	29 12.1%	82 8.0%
Transfer Rate Enrolled in University/ (Registered	4.8%	4.6%	9.4%	7.5%	14.0%	14.7%	16.7%	11.1%

minus Not Reached)								
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The Table shows that 11.1% of the students who have enrolled in the GAS program since 1996 Fall semester have transferred to university since leaving the program. The numbers also indicate an increasing percentage of students each year, growing from 4.8% from the 1996 Fall semester to 16.7% from the 1999 Fall Semester. These numbers are probably a conservative estimate of the transfer rate because a significant number of those not contacted would have been eligible to transfer and could have increased the percentage of those attending a college or university.

With this information, the transfer rate for the GAS program can be measured using an Ontario modified version of Gellin's models. The Entering Student Cohort model (Note 7) uses as its denominator students who in the same year of entering "successfully completed" a minimum of 12 transferable credits. Were a student to complete one year of the GAS program with a minimum grade point average of 3.0, that person would be able to gain entrance to a university. The denominator, therefore, would be the total number of students, minus those who could not be reached, and minus those who were withdrawn for Academic reasons. For the Exiting Student Cohort Model (Note 8), because the denominator includes only those who were no longer with the college, we would also subtract those students who are still in the program. The numerator for both is the number of students enrolled at a university at the time of the survey. Table Three calculates the transfer rate according to this modified version of both models.

**Table Three**

<b>Calculating Entering and Exit Model Transfer Rate</b>								
<b>GAS program Fall 1996 to Fall 1999</b>								
	<b>Semester</b>							
	Fall 1996	Winter 1997	Fall 1997	Winter 1998	Fall 1998	Winter 1999	Fall 1999	Total
<b>Denominator</b>								
All Surveyed	104	65	117	80	121	75	174	736
Entering Model	30	17	45	30	69	33	96	320
Exiting Model	29	16	43	28	62	27	72	277
<b>Numerator</b>	5	3	11	6	17	11	29	82
<b>Transfer Rate</b>								
All	4.8%	4.6%	9.4%	7.5%	14.0%	14.7%	16.7%	11.1%
Entering Model	16.7%	17.6%	24.4%	20.0%	24.6%	33.3%	30.2%	25.6%
Exiting Model	17.2%	18.8%	25.6%	21.4%	27.4%	40.7%	40.3%	29.6%

Not surprisingly, the transfer rate is significantly different from

that calculated in Table Two and is certainly more flattering than the strict percentage of all the entering cohort. The results show an overall Entering Model transfer rate of 25.6%, and an overall Exiting Model transfer rate of 29.6%. Looking at the pattern over those years, the rate rises from 16.7% and 17.2% to 30.2% and 40.3% from those students entering in Fall 1996 to Fall 1999 for the Entering and Exiting models respectively. The more than doubling of the transfer rate for these models makes one question their merits. Specifically, an observer could ask how excluding unsuccessful students contribute to the analysis of transfer.

Gellin speculated that the models could be more finely modified to calculate the transfer rate only for those whose original intention was to transfer. Indeed, the majority of students in the GAS program enrol with the intention of transferring to a university. For a significant minority, however, the intention is to enrol in another college program. Another measure of the transfer rate would be to use as the denominator for both the Entering and Exiting Model only those students whose intention was to continue their education at university, a version of the Gellin's Transfer Readiness Model (Note 9). Table Four is a documentation of that percentage:

**Table Four**

<b>Calculating Transfer Rates for Intenders Only - All Models</b>								
<b>GAS program Fall 1996 to Fall 1999</b>								
	<b>Semester</b>							
	Fall 1996	Winter 1997	Fall 1997	Winter 1998	Fall 1998	Winter 1999	Fall 1999	Total
<b>Denominator</b>								
All Surveyed	46	28	47	32	72	40	100	365
Entering Model	13	6	19	10	45	21	60	174
Exiting Model	13	6	18	10	40	18	46	151
<b>Numerator</b>	3	2	8	5	13	10	25	66
<b>Transfer Rate</b>								
All	6.5%	7.10%	17.0%	15.6%	18.1%	25.0%	25.0%	18.1%
Entering Model	23.1%	33.6%	42.1%	50.0%	28.9%	47.6%	41.7%	37.9%
Exiting Model	23.1%	33.6%	44.0%	50.0%	32.5%	56.0%	54.0%	43.7%

The first row represents all surveyed students who indicated that their future goal was to enrol at university, including those still in the program and those who are no longer in the college as a result of their academic record. The second row shows those students who met the criteria for the Entering Student model and who indicated their future goal was to enter a university. Similarly, the third row shows the number of students who matched the criteria for the Exiting Student Model. The fourth row shows the number of students in the survey who aspired and subsequently enrolled at a university (Note 10). The last three rows show the transfer rate for each.

The results show that 18.1% of all students in the General Arts and Science program who aspired for university were enrolled when the survey was conducted in the summer of 2001. The percentage increases significantly when comparing to those who were academically successful in the program. As well, consistent with the discussion above, the number of students transferring to university has increased steadily since 1996 such that 25% of those who entered the program in the Fall 1999 semester, and who aspired to enter university were enrolled by the summer of 2001.

Table Five is a representation of each transfer rate discussed in this paper as applied to the General Arts and Science program. Looking at just the rate for Total, we see how the Transfer Rate varies with each calculation, ranging from 11.1% when measuring against all students, 43.7% when using a modified version of the Exiting Student Cohort model.

**Table Five**

<b>All Transfer Rates General Arts and Science Program</b>						
<b>Fall 1996 to Fall 1999</b>						
	<b>Transfer Rates All</b>					
	All	All Intenders	Entering	Exiting	Entering Intenders	Exiting Intenders
<b>Semester</b>						
Fall 1996	4.8	6.5	16.7	17.2	23.1	23.1
Winter 1997	4.6	7.1	17.6	18.8	33.6	33.6
Fall 1997	9.4	17.0	24.4	25.6	42.1	44.0
Winter 1998	7.5	15.6	20.0	21.4	50.0	50.0
Fall 1998	14.0	18.1	24.6	27.4	28.9	32.5
Winter 1999	14.7	25.0	33.3	40.7	47.6	56.0
Fall 1999	16.7	25.0	30.2	40.3	41.7	254.0
<b>Total</b>	11.1	18.1	25.6	29.6	37.9	43.7

The chart also illustrates an increasing transfer rate with each intake since Fall 1996, regardless of which measure is used. Just looking at the transfer rate when compared to all students, the percentage has risen from 4.8 in Fall 1996 to 16.7 in Fall 1999.

The percentage rate increases with each adaptation of the model because the number in the denominator decreases while the numerator remains the same. By including those who had successfully completed a particular number of transfer courses in the denominator, the intent of Gellin's models is to capture only those students who appeared to be enrolling for the purposes of transfer. There is acknowledgment that not everyone who completes these courses is planning to attend university, therefore, Gellin's suggested refinement to include only those who expressly state their university aspirations. It is not clear, however, if the proposed models were intended to exclude those who attempted but were unsuccessful in completing the required number of transfer credits, as has been done in this analysis of the General Arts and Science Transfer Rate.

However, for this GAS analysis, success has been interpreted as continuing in the program even though the GPA would not qualify the student to gain entrance to a university. What needs to be examined is the extent to which their inclusion balances off the exclusion of academically unsuccessful participants. Readers of this analysis would also need to ask if the results speak to the quality of the students or the quality of the program, a subject for further examination. Given the mandate to assist students in their future aspirations, the rate which compares university transfers to program participant's aspirations is the most beneficial and valid transfer rate for the GAS program.

### **Discussion and Conclusion**

The data presented in this paper highlight the increasing importance of monitoring student transfer between colleges and universities. If transfer was not the original intention of Ontario colleges, students themselves, through their actions, are steering the institutions in that direction. The Seneca data clearly show that there is a significant desire on the part of incoming students to continue their education and obtain a degree. Although it is the largest, Seneca is not atypical and were similar statistics compiled for other CAATs, the numbers could be expected to be the same. The data clearly justifies college efforts and activities to establish transfer agreements. Indeed, given the desire expressed, it is the college's responsibility to continue developing these connections. Furthermore, were this pattern replicated at other community colleges, the responsibility would be on the part of the Ontario provincial government to establish a system of transfer similar to that in British Columbia.

The collection of graduate data for the Key Performance Indicators provide the Ontario CAATs an opportunity to quantify the amount of transfer that is occurring provincially and at an individual college. It may be possible, as well, to identify those who indicated transfer and to survey those respondents for additional information. Moreover, it would be incumbent on the part of colleges to ascertain answers to such key questions as the ease of transfer, the number of transfer credits, the preparation of students, the degree being pursued and ultimately, the success of college-transfer students. The KPI data is a potentially valuable resource that should be mined. Indeed, as colleges continue to facilitate the transfer function, the data would inform the college with respect to curriculum and systems to better assist the university bound college student.

The statistics from the General Arts and Science program reflect the trends demonstrated by the data collected on intention and actual transfer. Given the opportunity and the program, the number of students wanting to transfer and the number who eventually enrol will steadily increase. It remains to be seen how the students in this program compare to others where the number of aspirants is also at a high level. An investigation into potential differences in high school education and age would be a worthwhile exercise. Certainly the GAS



program is not typical of your standard CAAT offering. GAS is not geared toward a specific career and its intention is both to prepare students for further education and to maximize the amount of transfer credit to a university. Arguably, it would be dangerous to extrapolate to the entire college system from the data presented. The data does demonstrate, however, what is possible.

As well, the General Arts and Science program is a liberal arts program and the students typically transfer to an Arts degree program at some university. Many enter unclear on their choice of discipline whereas those in other programs at least know they want to achieve a credential in that particular area. These students are also transferring to university, as indicated by the KPI graduate survey, yet we know nothing about them. GAS students would have formed a tiny portion of the graduates in that survey and given their uniqueness, tell us little about what to expect from the others. An analysis similar to what has been presented would assist our understanding of college-to-university transfer phenomenon.

Finally, the measuring and reporting of transfer will continue to be an important issue in an ongoing political debate about the role and function of Ontario CAATs and of particular programs. Within the current Ontario situation, Gellin's models and definitions can only be applied loosely. The models are premised on a series of specific courses in which students can enrol and obtain direct transfer. Without those courses, it is impossible to separate the students who have successfully completed the minimum number of transfer credits. A modification may be to measure only in programs where there are established agreements such as what has been done here for the General Arts and Science program. The analysis could be refined further by focusing on those students who expressly indicated their intention to seek a university degree. In fact, the extent to which this narrow group of students are able to transfer may be the fairest expression of transfer rate for the Colleges. It captures the essence of Gellin's models by focusing on transfer type programs, at the same time recognizing the varied motivations of students entering community colleges.

The most recent introduction of Applied Degrees in Ontario Colleges of Applied Arts and Technology will accelerate the discussion about the relationship between the college and university sectors. This new development could heighten interest on the part of universities to solidify their exclusive jurisdiction in the granting of degrees by increasing transfer opportunities. The collection of transfer data would assist both parties: positive information would comfort universities and would provide ammunition for the colleges. Alternatively, the granting of Applied Degrees may enable Colleges to ignore Ontario Universities and vigorously pursue increasing their own degree granting opportunities. Even in this scenario, information about transfer, particularly data which illustrates student success, could assist in legitimizing their status and that of their graduates to the public. Solid, reliable information on transfer, in both directions, needs

to be collected and assessed in this changing environment of Ontario post-secondary education.

### Notes

1. Ultimately, the report said more about what is not known than what is available. The following were listed by Rodger Cummins as what is not known in the analysis of existing data:
  - How many, their demographics and social backgrounds
  - Academic background, how much achieved
  - How many complete, what completed
  - What motivated them to seek university
  - How many aspire

Also included his list: the numbers who enrolled in universities outside of Ontario, what proportion of the total university population they represent, the total number including part-timers who applied for admission to Ontario universities and their success in gaining admission to their programs of choice. Fanshawe College in London, for example, offers five courses that have direct, one-for-one transfer credit with the University of Western Ontario. Humber and Seneca College teach two and four 3.0 credit courses respectively that are "York approved" and therefore, have direct one-for-one transfer credit. Even within these institutions, the availability of these courses is limited
2. Smith (1998) asked successful transfer students their reasons for applying to university in three different areas: Career, Personal Development, and Other. Of the choices available in Career, 65% of the respondents rated as "5" or "very important" the statement, "I felt that I would have better employment opportunities with a university degree than with a college diploma or certificate". Of the five statements for Personal Development, 50% rated, "I wanted to learn more about things that interest me" as very important; and, 35% of respondents rated "I always intended to go to university" as very important, the highest response of those available in the Other category. In a survey of Nipissing transfer students between 1992-98 (Craddock 1999), when respondents were asked their reasons for transferring to university, 44% answered "different career opportunities, 35% for "personal development", 21% for Bachelor of Education and 11% for "different learning environment. Between the two studies, career opportunities appears to be the most common reason for attending. Personal development is an important reason for a significant number of the transfer students
3. The Nipissing Study queried the timing of the student's intention to transfer, and reported that 22% of the respondents had intended to transfer prior to beginning at college. Of those who decided at some other point, 46% answered "during community college program, 34% "after graduation from community college" and 47% "after entering the workforce". Because the respondents were not restricted to one answer the

total percentage adds up to more than 100. It is difficult to determine where the overlap may have occurred, but it is logical to assume that those responding to “during community college program” did not also answer “after graduation” or “after entering the workforce”. In Smith’s doctoral thesis, “Just over a quarter (26.4%) of the respondents first made the decision that they wanted to attend university while attending high school. Close to a third (31.3%) made the decision after leaving college and 42% made the decision while attending college.”

4. Exiting Student Cohort Model - Denominator: the number of students who were enrolled at a college in any given academic year and had completed at least 12 university transferable credits and who did not return to same college in the next academic year. Numerator: the number of students in the denominator who enrolled in a B.C. public degree granting institution anytime in the next two academic years following their last year of enrolment at the college.
5. As the charts show, the Fall intake in 1996 was approximately 150 students. The 2001 Fall intake was 280 students, which has risen to a total of 380 at two different campuses in Fall 2003. The January intake has remaining relatively steady growing from 90 to 120, but will increase to 200 in January 2004.
6. Entering Student Cohort Model - Denominator: the total number of all students who entered a college for the first time in a given year, who had no prior college or university experience, and who in the same academic year successively completed a minimum of 12 college-level credits that have transfer credit to at least one B.C. public four year degree granting institution. Numerator: the number of students in the denominator who enrolled in a B.C. public four year degree granting institution anytime within six years of initial college entrance
7. Exiting Student Cohort Model - Denominator: the number of students who were enrolled at a college in any given academic year and had completed at least 12 university transferable credits and who did not return to same college in the next academic year. Numerator: the number of students in the denominator who enrolled in a B.C. public four year degree granting institution anytime in the next two academic years following their last year of enrolment at the college.
8. Transfer Readiness Model - Denominator: the number of first time college students with no prior college experience admitted in any given academic year who expressed their primary educational goal as eventual transfer to a four-year degree granting institution. Numerator: the number of students in the denominator who successfully completed “x” college credits of university transferable courses with a 2.0 GPA or better within four years (and hence minimally eligible for, although not guaranteed, admission to all four year degree granting institutions).
9. The number of students in the numerator is smaller than Table

Three. Not all those who were enrolled at university intended to do so upon entering the college. In total, 66 of the 81 who were enrolled indicated that they entered the program with the aspiration to attend university after graduation. The numbers show, therefore, that 18.5% decided to enrol either during or after their tenure in the GAS program

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